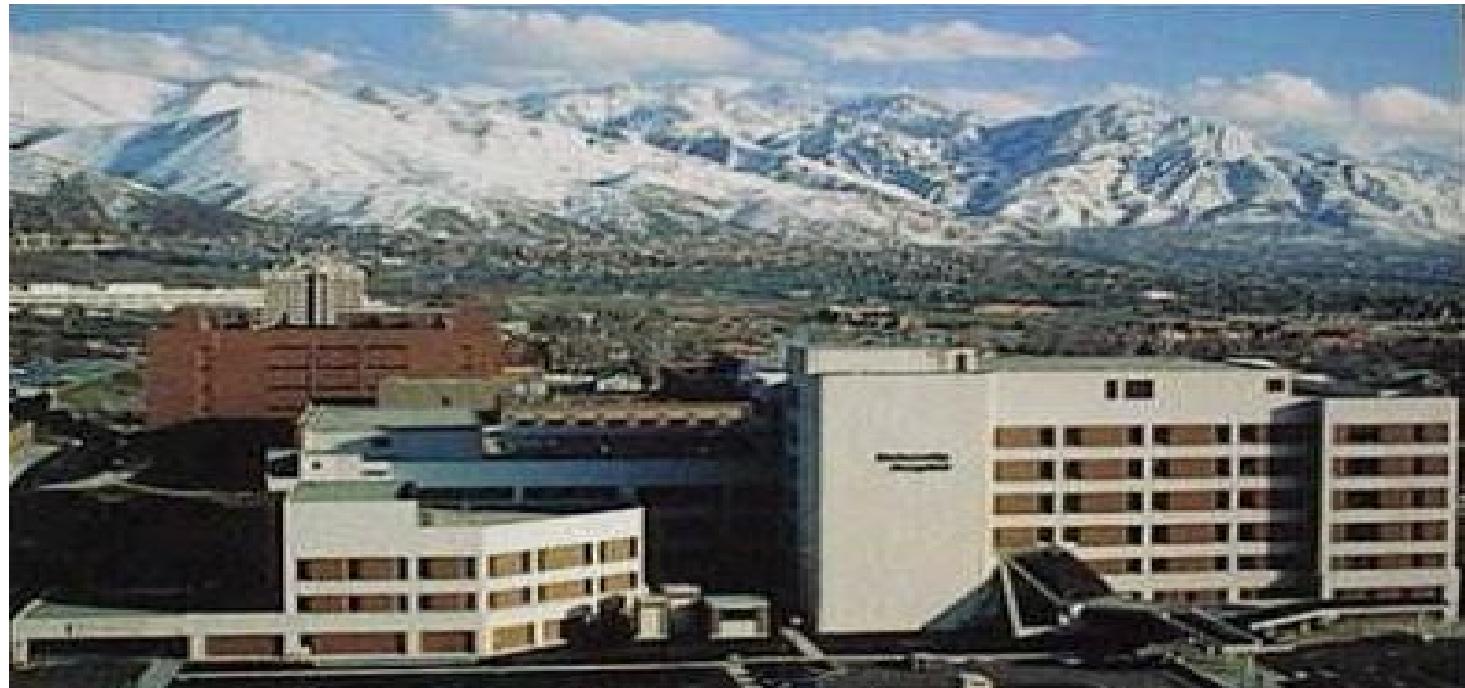


Center for Homogeneous DNA Analysis

University of Utah

Departments of Pathology, Mathematics, and
Engineering



What We Do And Why

- High Resolution Melting Analysis
 - We Watch DNA Unwind Very Carefully
- Mutation Scanning, Genotyping,
Transplant Compatibility
- Proprietary Technology



What's So Special?

- Faster, More Economical
 - Minutes vs. Hours
 - Pennies vs. Dollars
- We Do It Automatically Without Opening The PCR Tube - Simpler
- Highly Accurate
 - Detects Single Base Changes In 1000bps

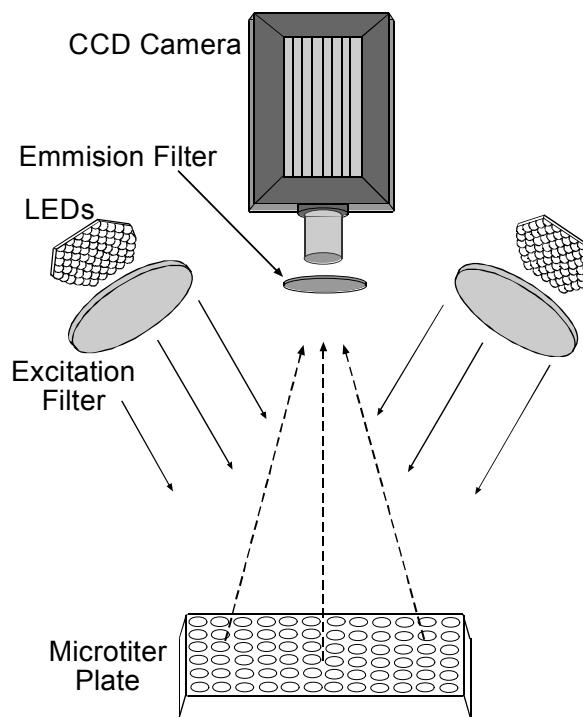
High-Resolution Melting Analysis: Hardware, Reagents, Software

HR | 1™

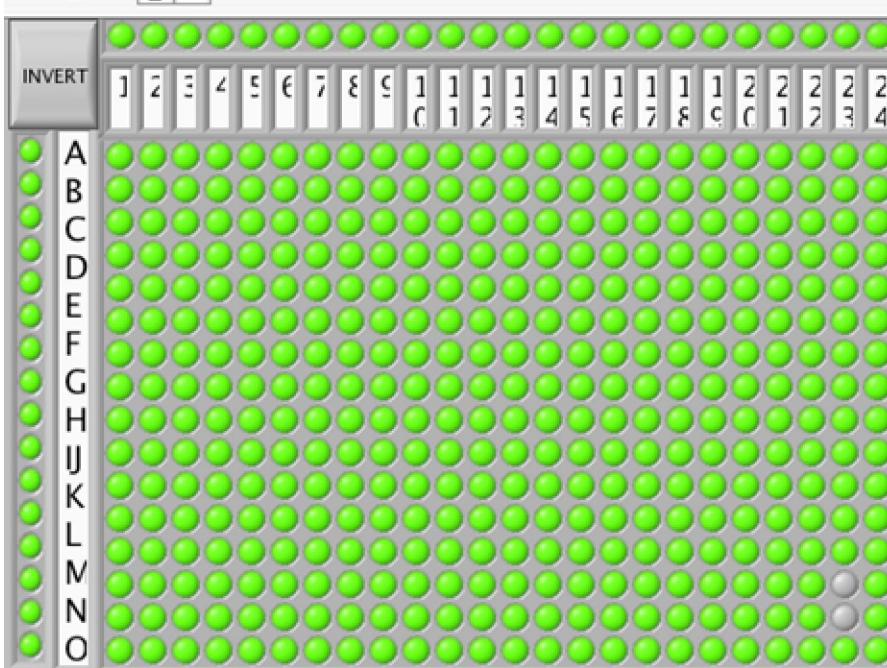
High Resolution Melter



LightScanner™

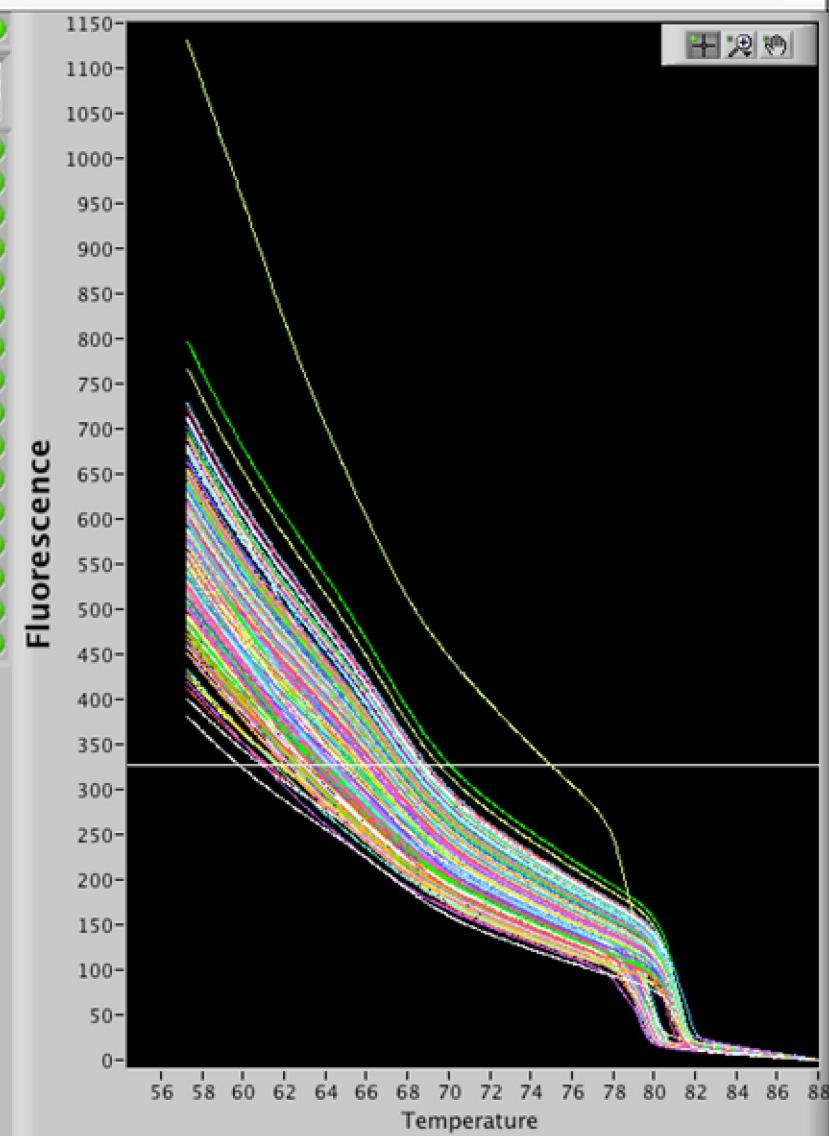


ChooseSamples384.vi

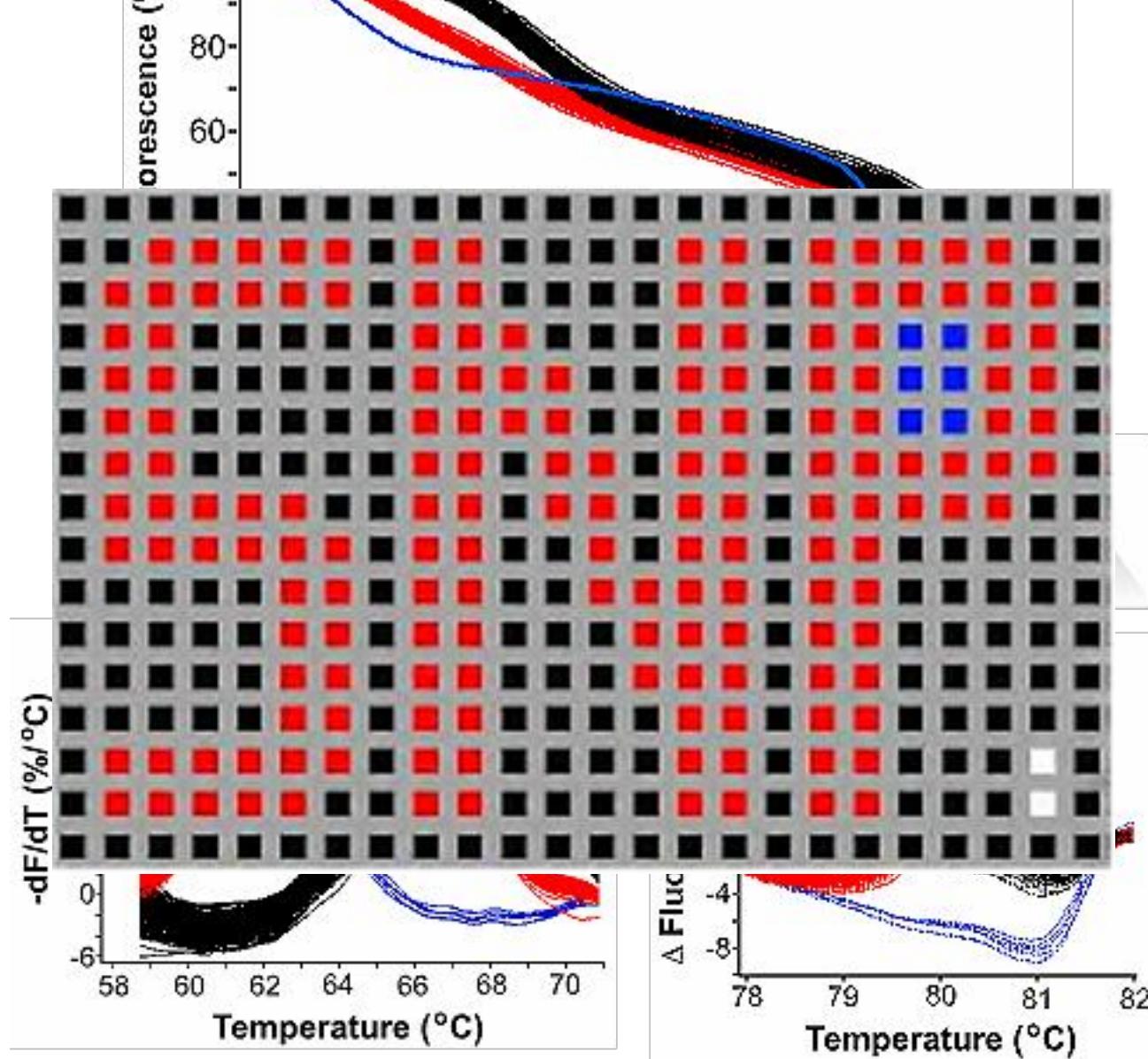


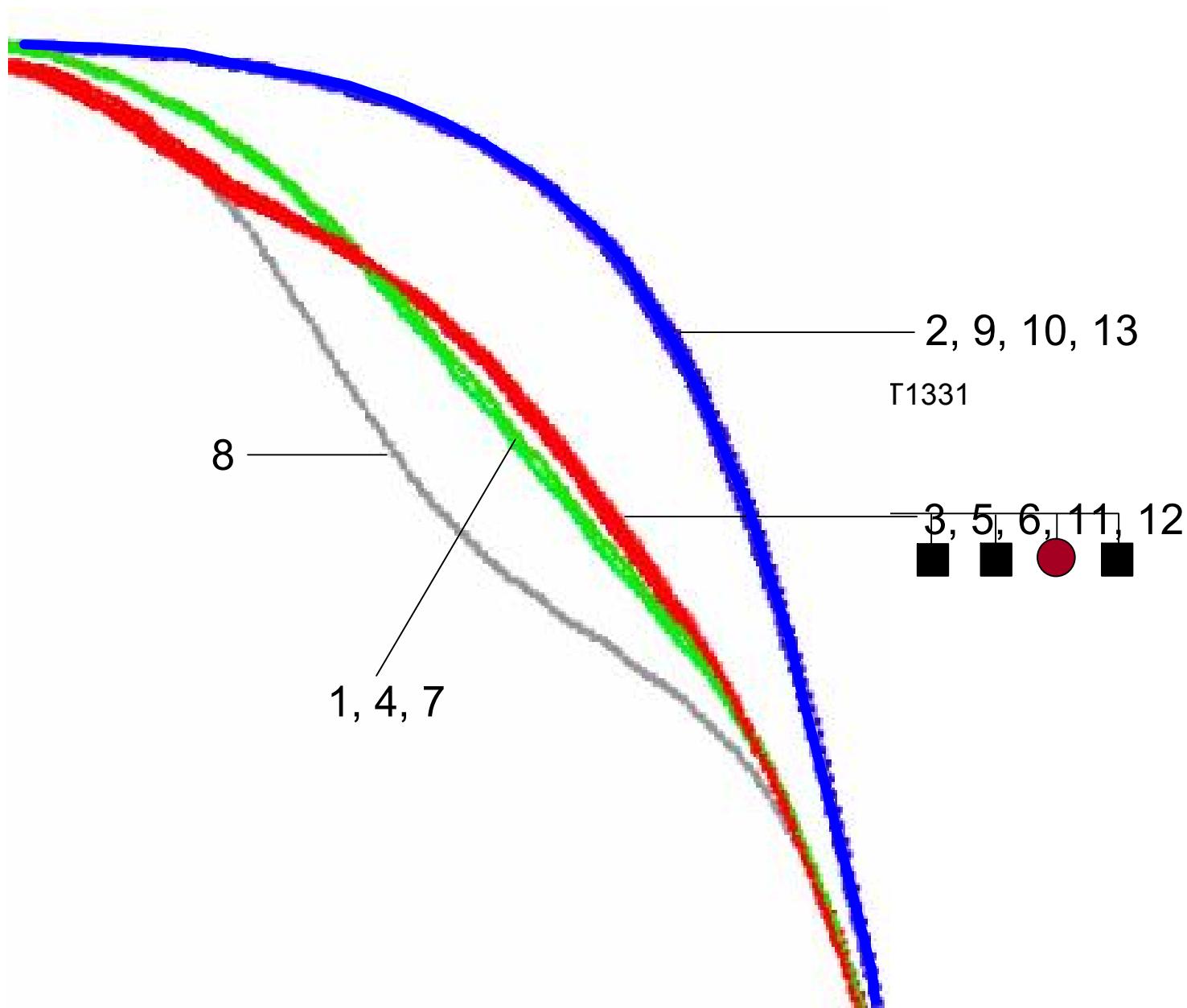
382 samples

OK



A Medically Important Mutation - 3000 tests/mo in UT “Auto Call” of Plate Using Unbiased Hierarchical Clustering





Transplant Matching

- Traditionally done by sequencing or serology:
 - \$1,200 per family member (\$15,600 for UT1331 family)
- High-resolution melting analysis:
 - can be priced as low as \$100 per family member (\$1,300)
- Transplants: 50,000/year U.S.

Current Status

- Scanning Technology
 - Partly Licensed to Utah Company
 - Product Sales: \$600,000 first year
 - Enthusiastic customer feedback (e.g. Mayo Clinic)
 - Twelve new jobs
- Two Fast Track STTRs granted
 - \$1.7M matching funds
 - For advanced instrumentation

The Vision

- Make DNA screening routine for:
 - Research (individual labs ~ core labs)
 - Gene-mapping organizations
 - Clinical reference labs
 - Eventually, hospital STAT labs
- Displace 95% of DNA sequencing market

Market Size & Forecast

- 42 million assays annually
 - \$10M using melting analysis
 - Displaces \$150M using sequencing
- 12,000 instruments, software, \$195M
- Reagents
 - Developing market
 - HLA, 50,000 transplants (US)
 - Molecular tests growing at +15%

Future Reality

- DNA diagnosis at your doctor's office.
 - PCR in 15 min
 - Melting in 2 min
 - Immediate automated analysis
- PCR and melting on a chip
 - $1 \Rightarrow 32 \Rightarrow 384 \Rightarrow 384,000$
 - Whole genome analysis (30,000 genes)

